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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,723	02/17/2006	Joeri Denayer	DECLE69004APC	7153
20995 7590 02/20/2008 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER NGUYEN, HUY TRAM	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 02/20/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/568,723	<b>Applicant(s)</b> DENAYER ET AL.	
	<b>Examiner</b> HUY-TRAM NGUYEN	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17 is/are allowed.
- 6) ☒ Claim(s) 18-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>February 17, 2006</u>   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by **Ragil et al. (US Patent No. 6,156,950)**.

Regarding Claim 18, Ragil et al. reference discloses a method for separating mono-branched hydrocarbons from a mixture of hydrocarbons (**Column 9-24 – C5-C8 cuts or intermediate cuts comprising paraffins and preferentially adsorb mono-branched paraffins**) which comprises bringing said mixture of hydrocarbons into contact with only one adsorbent (**Column 4, Lines 6-9, Column 8, Lines 23-24 – process comprises at least two units which can operate using an absorbent**).

Regarding Claim 19, Ragil et al. reference discloses the method according to claim 18 wherein mono- branched hydrocarbons from said mixture are preferentially adsorbed (**Column 1, Lines 24 - preferentially adsorb mono-branched paraffins**).

Regarding Claim 20, Ragil et al. reference discloses the method according to claim 18, wherein said adsorbent is a zeolitic adsorbent (**Column 8, Line 41- Column 9, Lines 65 – i.e. Type A zeolites**).

Regarding Claim 21, Ragil et al. reference discloses the method according to any claim 18, wherein said mixture is selected from linear, mono-branched, and multi-branched alkanes **(Column 6, Lines 25-37)**.

Regarding Claim 22, Ragil et al. reference discloses the method according to any claim 18, wherein said separation is based on entropic effects **(Abstract - separation process by adsorption – inherency)**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ragil et al. (US Patent No. 6,156,950)**.

Regarding Claim 23, Ragil et al. reference discloses a method for separating mixtures of non-aromatic hydrocarbons into fractions of linear, mono- branched and multi-branched hydrocarbons **(Abstract)** which comprises contacting said mixture with zeolite having an adsorbent activity **(Column 4, Lines 6-9 and Column 8, Line 29-Column 9, Line 58)**.

Ragil et al. reference also discloses that the suitable zeolite is silicalite and numerous other crystalline aluminosilicates are suitable for use as an adsorbent for this process.

However, Ragil et al. reference does not disclose that the zeolite is MCM-22 (a silicalite) having a catalytic activity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use MCM-22 zeolite, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Also, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use MCM-22 zeolite having a catalytic activity since it was

known in the art that zeolite can be used as a catalyst in an isomerization process to form higher branched paraffins.

***Allowable Subject Matter***

Claims 1-17 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claim 1, the closest prior art, Ragil et al. (**US Patent No. 6,353,144 B1**) reference discloses claimed process except for the adsorbent having a selectivity order from **mono-branched to linear** further to **multi-branched hydrocarbons**.

Claims 2-17 are dependent claims of claim 1.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY-TRAM NGUYEN whose telephone number is (571)270-3167. The examiner can normally be reached on MON- THURS: 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HTN  
2/5/08

/Walter D. Griffin/  
Supervisory Patent Examiner, Art Unit 1797